

IN THE CLAIMS

Please amend claim 16 and add claims 31-44 as follows:

Claims 1-15 (canceled).

Claim 16 (currently amended): A method for generating local oscillator frequency signals for dual frequency signals, wherein the method comprises:

generating a sub-harmonic frequency so as to enable harmonics of the sub-harmonic frequency to generate local oscillator frequency signals for the dual frequency carrier signals, and mixing the dual frequency carrier signals with the local oscillator frequency signals, to generate distinct intermediate frequency signals for each dual frequency carrier signal; and

separating the dual frequency carrier signals, and switching between the dual frequency carrier signals, responsive to exchanging I and Q phases in-phase and quadrature-phase components of the local oscillator frequency signals.

Claims 17-30 (canceled)

Claim 31 (new): The method of claim 16, comprising a global positioning system receiver, wherein the dual frequency carrier signals comprise L1 and L2 GPS carrier signals.

Claim 32 (new): The method of claim 31, wherein the sub-harmonic frequency generator is adapted to mix the third harmonic with the L2 carrier, and the fourth harmonic with the L1 carrier.

Claim 33 (new): The method of claim 31, wherein the sub-harmonic frequency is about 401.62 MHz.

Claim 34 (new): The method of claim 31, further comprising passing the L1 and L2 frequencies and rejecting other frequencies by using a split-band surface acoustic wave filter connected to the sub-harmonic frequency generator.

Claim 35 (new): The method of claim 31, further comprising generating a final intermediate frequency wherein the difference between the distinct intermediate frequency signals is twice the final intermediate frequency.

Claim 36 (new): The method of claim 16, wherein the sub-harmonic frequency generator comprises:

a voltage controlled oscillator;
a mixer for mixing the dual frequency carrier signals with the local oscillator frequency signals; and

wherein generating and mixing comprises generating in the voltage controlled oscillator, and mixing in the mixer.

Claim 37 (new): The method of claim 16, wherein mixing comprises using an integrated switched capacitor sub-sampling mixer, and wherein generating and mixing comprises generating and mixing in the integrated switched capacitor sub-sampling mixer.

Claim 38 (new): The method of claim 37, wherein the sub-sampling mixer includes switches

comprising N-channel metal oxide semiconductor transistors, and wherein mixing further comprises mixing in the N-channel metal oxide semiconductor transistor switches in the sub-sampling mixer.

Claim 39 (new): The method of claim 16, further adapted to generate a final intermediate frequency, wherein the image reject mixer is adapted to generate the final intermediate frequency upon mixing with a local oscillator frequency signal which is between the L1 and L2 intermediate frequencies, further comprising generating a final intermediate frequency in the image reject mixer.

Claim 40 (new): The method of claim 16, wherein the intermediate frequency signals generated in the sub-harmonic frequency generator are on either side of the local oscillator frequency signal in the image reject mixer, and are adapted to be separated by the image reject mixer, wherein generating further comprises generating the intermediate frequency signals on either side of the local oscillator frequency signal of the image reject mixer, and separating the intermediate frequency signals in the image reject mixer.

Claim 41 (new): The method of claim 16, wherein the image reject mixer includes a plurality of outlets adapted to be connected therein, and is adapted to receive the dual frequency carrier signals simultaneously through the plurality of outputs, further comprising receiving the dual frequency carrier signals simultaneously through the plurality of outlets in the image reject mixer.

Claim 42 (new): The method of claim 16, wherein the image reject mixer includes a plurality

of outlets adapted to be connected therein, and is adapted to switch between the dual frequency carrier signals through one of the plurality of outputs, further comprising switching between the dual frequency carrier signals through one of the plurality of outputs in the image reject mixer.